Docket No. 100390-6370

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Massey et al.
Serial No:	Unassigned
Filed:	December 5, 2001
For:	**GRAPHITIC NANOTUBES IN LUMINESCENCE ASSAYS**
Group Art Unit:	1641
Examiner:	Ceperley, M.

919 Third Ave
New York, NY 10022

Assistant Commissioner for Patents
Washington, DC 20231

PRELIMINARY AMENDMENT

Sir:

Prior to the calculation of the fees due and the issuance of a first Office Action in this application, please amend the specification and claims as indicated below.

IN THE SPECIFICATION

Pursuant to 37 C.F.R. §§ 1.121(b)(1)(i) and (ii), please delete the paragraph on p. 1, lines 2-15 and insert therefor the following paragraph:

This application is a continuation of U.S. Application Serial No. 09/243,215, filed February 2, 1999, which is a continuation of U.S. Application Serial No. 08/611,347, filed March 6, 1996, now U.S. Patent No. 5,866,434, which is a continuation-in-part of U.S. Application Serial No. 08/352,400, filed December 8, 1994. The subject matter of the parent applications are hereby incorporated by reference.

IN THE CLAIMS:

Pursuant to 37 C.F.R. §§ 1.121(c)(1) and (3), please cancel claims 1-18 without prejudice or disclaimer and add the following new claims 19-38:

19. (New) A substance comprising a carbon nanotube, an electrochemiluminescence co-reactant attached to said carbon nanotube, and an electrochemiluminescent label attached to said carbon nanotube.

20. (New) The substance of claim 19, wherein said electrochemiluminescent label comprises a metal atom.

21. (New) The substance of claim 20, wherein said metal is Ru, Os or Re.

22. (New) The substance of claim 20, wherein said metal is Ru.

23. (New) The substance of claim 19, wherein said electrochemiluminescent label is $Ru(bpy)_3^{2+}$.

24. (New) The substance of claim 19, wherein said electrochemiluminesence co-reactant is NADH, NADPH, NAD+ or a derivative thereof.

25. (New) The substance of claim 19, wherein said electrochemiluminescent label is attached to said carbon nanotube via a functional group.

26. (New) The substance of claim 19, wherein said electrochemiluminescence co-reactant is attached to said carbon nanotube via a functional group.

27. (New) The substance of claim 25, wherein said functional group is COOH.

28. (New) A composition comprising (i) the substance of claim 19 and (ii) an enzyme and/or a substrate.

29. (New) A kit comprising, in one or more containers, (i) the substance of claim 19 and (ii) an enzyme and/or a substrate.

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30. (New) The composition of claim 28, wherein said composition comprises said enzyme and said enzyme is dehydrogenase.

31. (New) The composition of claim 30, wherein said dehydrogenase is glucose dehydrogenase.

32. (New) The kit of claim 29, wherein said composition comprises said enzyme and said enzyme is dehydrogenase.

33. (New) The composition of claim 30, wherein said composition comprises said substrate and said substrate is a substrate of dehydrogenase.

34. (New) A composition comprising (i) the substance of claim 19, (ii) an enzyme and (ii) a substrate to said enzyme.

35. (New) The composition of claim 34, wherein said electrochemiluminesence co-reactant is NADH, NADPH, NAD+ or a derivative thereof.

36. (New) The composition of claim 34, wherein said electrochemiluminesence co-reactant is NADH, NADPH, NAD+ or a derivative thereof, said enzyme is dehydrogenase and said substrate is a substrate of dehydrogenase.

37. (New) A method for detecting the presence or amount of analyte in a sample comprising:

(a) contacting said sample with an assay composition containing the substance of claim 19; and

(b) detecting or measuring electrochemiluminesence emitted from said electrochemiluminescent label.

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38. (New) The method of claim 37, wherein said analyte is an enzyme and said composition further comprises a substrate of said enzyme or said analyte is an enzyme substrate and said composition further comprises an enzyme for said enzyme substrate.

REMARKS

Original claims 1-18 were cancelled without prejudice or disclaimer and new claims 19-38 are hereby submitted for the Examiner's consideration. No new matter has been added.

No marked up version of the replacement paragraph or new claims are submitted since the replaced paragraph and the previously pending claims were all deleted or cancelled. 37 C.F.R. §§ 1.121(b)(1)(iii) and (c)(1)(ii).

A check for $370.00 has been submitted to cover the cost for filing this application with these new claims for a small entity. No additional fees are believed due. However, if any additional fees are necessary, the Commissioner is hereby authorized to charge such fees to Deposit Account No. 50-0540.

Applicants believe these new claims 19-38 are patentable and in condition for allowance. These claims are supported in the specification (e.g., p. 80, line 25 - pp. 83, line 16), the examples (e.g., Ex. 9-12), and the original claims as filed.

Furthermore, Applicants are not aware of any prior art that has all of the elements of the claims or which in proper combination with other prior art would provide all of the elements of the claims. For example, none of the prior art teaches a substance comprising a carbon nanotube, an electrochemiluminescence co-reactant attached to the nanotube, and an electrochemiluminescent label attached to the nanotube.

In view of the foregoing, Applicants respectfully submit that the claims are in condition for allowance and such action is earnestly solicited.

RESPECTFULLY SUBMITTED

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